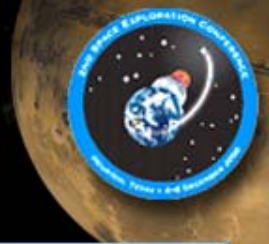


Implementing the Vision **2nd Space Exploration Conference**



Advanced Human and Robotic Technologies



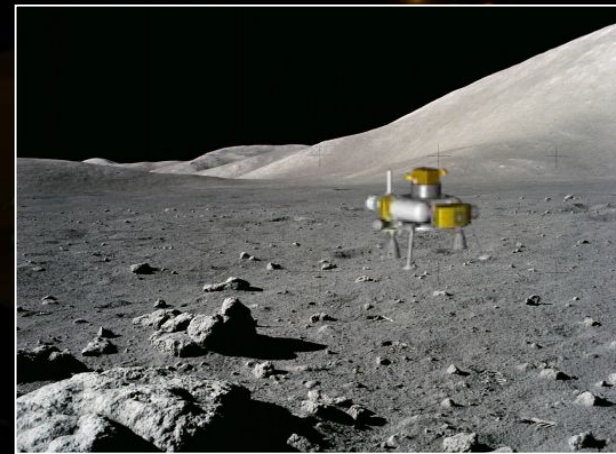
Carl Walz,
Advanced Capabilities Division
NASA Exploration Systems Mission Directorate

December 5, 2006

Robotic Precursor Missions



- **Provide early information for human missions**
- **Resolve the many unknowns at the North and South Poles**
- **Enable capable and sustainable exploration**



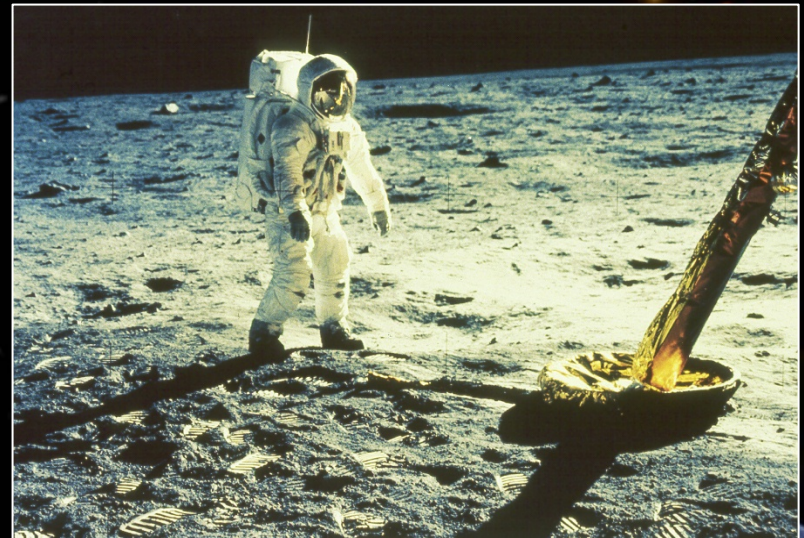
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Human Research to Enable Exploration



Program Goals:

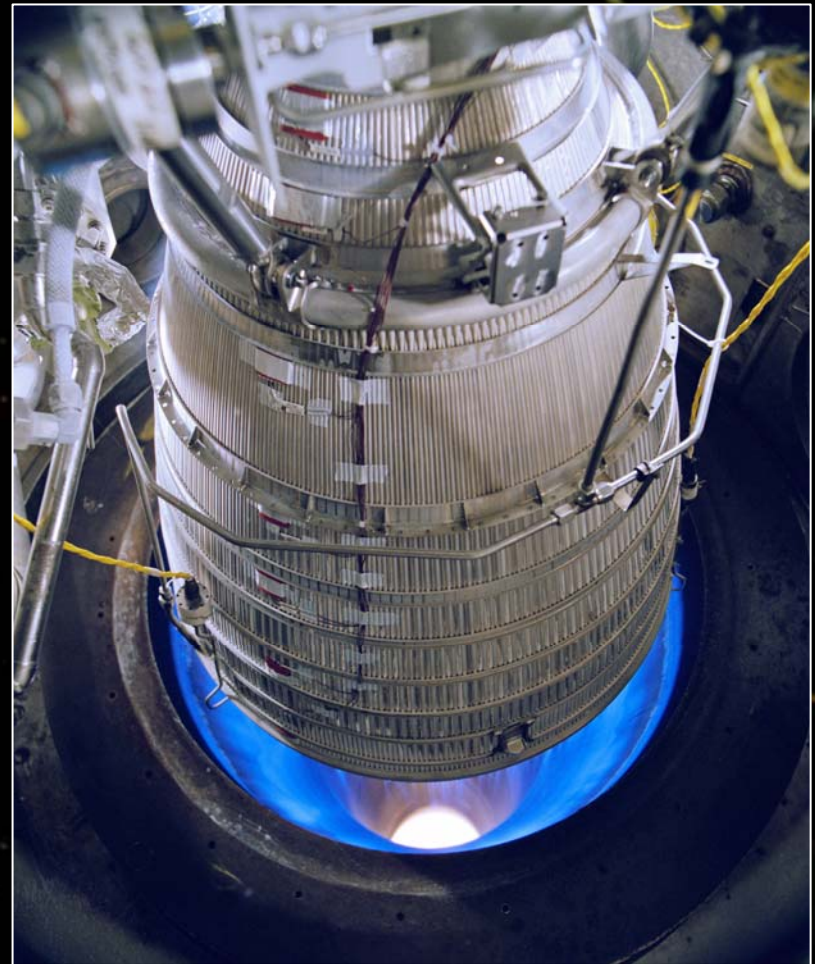
- To understand and reduce spaceflight human health and performance risks in support of exploration
- Enable development of human spaceflight medical and human performance standards
- Develop and validate technologies that serve to reduce medical risks



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Technology Development Program: Objectives

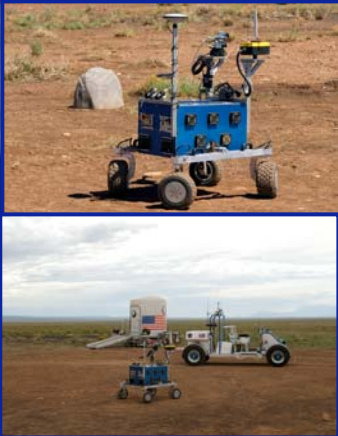
- The Technology Development Program matures advanced technologies, integrates component technologies into prototype systems and transitions technology to Constellation and Robotic missions





Desert "RATS" Participants

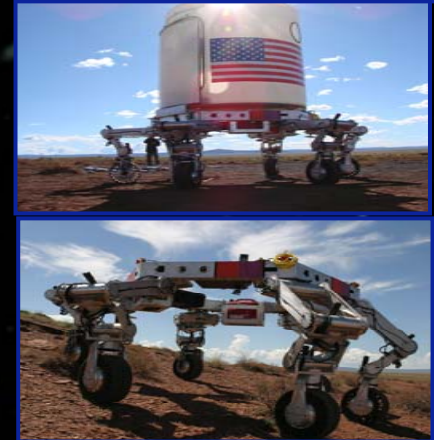
K-10 ARC



Meteor Crater Arizona, 9/2006



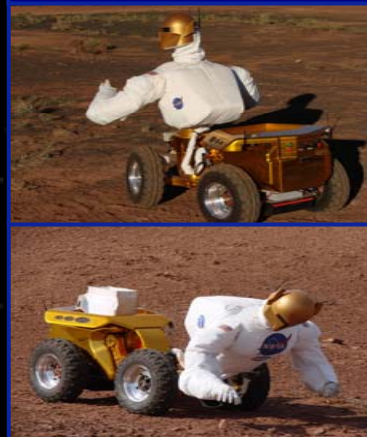
ATHLETE JPL



SCOUT JSC



Centaur JSC



Suits JSC



PRC LaRC



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Surface Scenario Video



cfid_2min.avi

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Scope of the Panel Discussion



Discussion on extending human presence across the solar system and beyond through:

- Implementing a sustained and affordable human and robotic program
- Develop supporting innovative technologies, knowledge, and infrastructures
- Incorporating them into the appropriate Constellation projects.